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NOTES FROM BASE REALIGNMENT AND CLOSURE TEAM MEETING DATED 13 AUGUST 2002 CNC CHARLESTON SC

8/23/2002

CH2MHILL

Notes from August 2002 BCT Meeting Navy's CNC BCT Office, Charleston, SC

PREPARED FOR: Charleston Naval Complex BCT

PREPARED BY: Richard Garcia

DATE: August 23, 2002

The August 2002 BCT Meeting was held at the DHEC office in Columbia, South Carolina. The meeting began at 1330 hrs on Tuesday, August 13, 2002, and concluded at 1600 hrs on Wednesday, August 14, 2002.

The meeting began with introductions of team members, agenda review, and action item review. Mr. Don Hargrove was introduced as a new member to the Team representing DHEC. The action items list from the previous meeting was reviewed with the following outcomes:

- DHEC did not receive a copy of the 90% design for the Avenue D Improvements. Several wells may require relocation. CH2M- Jones to forward a copy of the drawing that overlays the improvements over SWMUs and AOCs.
- EPA has not provided document regarding Cecil Field LUCs on golf course area due to internal changes in personnel. Dann will continue to pursue.

Tuesday, August 13, 2002

Update on Field Activities

Tom Beisel of CH2M-Jones provided an update on field activities at the following sites:

SWMU 3: Soil excavation completed in July.

SWMU 6: Excavation of contaminated soil performed in July.

SWMU 38: Performed sampling and replaced damaged well pad.

SWMU 25/70: Ninety day post-injection performance monitoring performed in July.

AOC 706: Sampled this month.

SWMU 65: Redevelopment and sampling scheduled for this month.

AOC 598/599: Eight soil samples collected.

AOC 613: DPT wells installed. Results to be address further in the meeting.

AOC 701: DPT, Wells, and sampling performed at this site. Evaluating analytical results.

AOC 711-720: Sampling performed at some of these oil-water separator sites. Evaluating analytical results.

AOC 607: Electrical resistance heating completed. SVE system turned off. Contractor demobilizing and IM completion report underway.

AOC 633: Excavation completed.

SWMU 39/2: DPT work completed. Free product at well 18 questioned by DHEC. CH2M-Jones to check this issue.

SWMU 17: Vac truck was used for free product removal at the site. Large amounts of groundwater were recovered (1000 gallons) but only one to two gallons of free product. Requested well approval for larger size diameter wells from DHEC. Product has tar characteristics (believed to be No. 5 fuel). DHEC questioned the Vac truck approach proposed with the larger wells based on the type of contaminant.

SMWU 8 & 9: A deep well and a shallow well were installed this month.

SWMU 166: Sampling of 50 wells performed at this site. Final injection in one area remains as a task.

SWMU 196: Phase III of the ChemOx treatment completed. Sampling scheduled for September.

AOC 537/575: Field crews experienced difficulties in coring for sample collection. Memo prepared documenting refusal site conditions

A list of wells to be abandoned was also submitted to DHEC for approval. Tom Beisel also delivered well logs at the meeting.

Status of Investigation Activity at Hunley Building - AOC 613/615/SWMU 175

Louise Palmer provided an overview of the work activities at these sites. She presented information regarding the new DPT work performed along the Hunley building. Several drawings were presented indicating concentrations of PCE, TCE, 1,2-DCE, and Vinyl Chloride. DPT samples along the edge of the building indicated low levels (below MCL) of contaminants. Proposed activities were reviewed including sampling of groundwater at several downgradient and vicinity wells. It was agreed that no further sampling be performed inside the building where the Hunley is being renovated at this time.

Hydrazine Update

Tom Beisel led a discussion regarding low levels of apparent Hydrazine concentrations detected at and around SWMU 8. He presented information about the general use, chemical properties, environmental fate, and reaction products of Hydrazine. The low concentrations are sporadic throughout a large area, making it difficult to identify a source. Laboratory data is questionable due to the fact that analysis is based on colorimetric results following an ASTM method. No EPA

method has been developed for this constituent. Additional samples were collected and split between labs for alternate laboratory testing to determine if the results received the date are an accurate indication of hydrazine or whether we are receiving "false positive" readings. The samples were tested using an alternate analytical method (ion chromatography) to determine the accuracy of the results. The results from the analytical data support that past reported detections of Hydrazine appear to be false positives from the colorimetric method and therefore, he recommended that Hydrazine not be monitored in future sampling events. He will summarize all the findings and recommendations on a memorandum as part of the SWMU 8 RFIRA and the SWMU 9 CMS.

Groundwater Monitoring Plan - Ongoing Changes

Tom Beisel provided a status of the recent well inspections performed at the Base. CH2M-Jones has completed inspections in Zones B, C, D, H, and I in addition to routinely performing inspections at wells were work is being performed. He received comments from DHEC this week from the "Groundwater Monitoring and Well Inspection Work Plan" and he is currently reviewing these comments.

Update on SWMU 25/70 and SWMU 196

Paul Favara provided a brief update from the recent sampling events at these two sites. Paul is presently generating a RFIRA report that summarizes the slow but steady reduction of Hexavalent Chromium and Total Chromium results at SWMU 25/70.

He also discussed the sample results obtained from four diffusion wells located along the south boundary of SWMU 196 in the marsh area by Shipyard Creek. The results confirmed that there have not been any significant changes at these locations over the last couple of years confirming that the remedial activities at the site have not contributed to any migration of the plume. Paul plans to sample in the near future four other barrier wells located in this area.

EI - Definition of Human and Groundwater Exposure

The discussion regarding Environmental Indicator (EI) was lead by Rob Harrell. It focused on site-specific issues including exposure from groundwater to surface water bodies, such as the case of SWMU 196, and indoor air quality concerns, such as the case at SWMU 166.

With regard to SWMU 196, groundwater migration to Shipyard Creek was discussed. In the event that groundwater contaminants eventually reach the creek, controls should be identified to prevent any human exposure. Determination of the contaminants source from samples in the surface water could become an issue based on the fact that there is a potential for contaminants from other facilities/sources discharging to this creek. At this time, based on resent results, contaminants from

SWMU 196 do not appear pose a groundwater migration problem for human exposure EI.

At SWMU 166 a drawing depicting the area of contamination at this site was reviewed in an effort to determine which facilities could potentially be exposed to indoor air quality issues. Only a couple of facilities appear to be within a plume area. Based on a discussion to determine the best methodology to identify any potential exposure, it was agreed by all parties to use/follow the "Supplemental Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway". This document is recognized by regulatory agencies for determining any potential risk at sites where the potential for indoor air quality exist for the human exposure EI.

Meeting Recap / Parking Lot / Review Wednesday Agenda

The team reviewed the agenda for the following day and the meeting was adjourned.

Wednesday, August 14, 2002

DED Leaching Model

Dean conducted a presentation in which he addressed Dual Equilibrium Desorption (DED), based on a recent article from the March-April edition of the magazine "Groundwater". In his presentation he provided a summary of the current SSL Model and assumptions about desorption incorporated into this model, description of the DED model concepts, examples of DED application, and discussion and recommendations. In his presentation he demonstrated how the current SSL guidance tends to be very conservative because of the single equilibrium desorption model, and how SSLs are adequate for predicting potential groundwater impacts where soil concentrations are high but are overly conservative at low soil concentrations. Dean provided an overview of the SSL and the DED models, equations, and graphs depicting the difference in the results from each model. It was also acknowledge that the study was limited as to the amount of compounds and types of soils tested but consideration in using the DED model should be made on sites such as those containing Methaline Chloride where a low SSL value exist.

He recommended that the DED model be considered as part of the evidence approach in identifying final COCs requiring corrective measures at sites with low soil concentration, at sites where this approach may offer some benefit. Site-specific SSLs for both paved and unpaved scenarios would continue to be calculated. It was noted that this models would only be considered for organic sites and not at sites with metal contaminants.

David Scaturo from DHEC indicated that because the DED model has not been validated on a wider array of chemicals and soil media types, that caution would have to be used in any application of it. Dean agreed that the DED model would only be considered as a potential supplement to the current process and, if used at all, would be done so in a manner that DHEC found to be reasonable and acceptable.

Acetone, Methylene Chloride, & BEHP in Soil and Groundwater as Lab Contaminates

Dean also led a discussion regarding common laboratory contaminants (CLCs). He explained the causes and sources of CLCs, statistics for 3 CLCs at the CNC, and provided

conclusions and recommendations. He addressed primarily acetone, Methylene Chloride, Phthalate Esters, 2-Butanone, and Toluene. He touched on EPA guidance on CLCs and non-CLCs detected in blanks. He also provided several tables from various zones at CNC were the data supported CLCs in the results. He recommended the use of the EPA guidance and also suggested evaluating blanks, cleanup methods, and lab cross-contamination when results from the analytical data were not suspect. It was suggested by DHEC to attach the blank data to the reports so that the information is used in evaluating the recommendations.

COPC / COC Selection & Refinement

Dann lead a discussion regarding chemicals of potential concern (COPC) and chemicals of concern (COC). It was noted that some reports were using the high value from the background data for a specific zone vs. using the mean data during the determination of natural occurrence in an area. Dann was concerned because in some instances background exceeds criteria typically used by EPA. It was discussed that the project notebook described the agreed upon process for inorganic COPC screening, which was to use the Zone specific range initially, and other Zones, if applicable. Dean noted that Dann's concerns had been were related primarily to arsenic at several Zone E sites and that CH2M Jones had accepted Dann's suggestions that arsenic be retained as a residential COC at those sites. Also, it was noted that the Zone E sites also will have the Zone-wide LUCs applied, which will provide residential exposure prevention across all of Zone E.

AOC 721 & 722 Update

Rob Harrell provided a figure that illustrated elevations and arsenic concentrations at AOC 721. He noted that Ensafe would be conducting the work at this site as part of the Zone J Work Plan. A schedule for the work has not been completed.

The groundwater contamination associated with Gridwell 11 has now been identified as AOC 722. A determination regarding if this is within CH2MJ-Jones scope of work is under review. The schedule for this work will be provided at the next BCT meeting.

Approval of LUC sites and applicability of Language in Team Notebook

Tony led a discussion regarding land use controls (LUCs). The team reviewed the write-up from the project notebook (paragraph 4.7) regarding LUCs and degree of remediation. It was decided that because of the decision record from the team documented in the project notebook and the implications that it could have on the future use of the facility, the project notebook should be made part of the public/permanent record documents.

Tony proceeded to discuss the implication that it may create changing the original reuse plan to any future use identified by the North Charleston and State ports Authority deviating from this plan. He also noted that there where several Fed-to-Fed transfers within CNC that conflict with the new proposed use of the facility. The original reuse plan, created by the CNC RDA to qualify for an Economic Development Conveyance, was used as the basis for the cleanup. Five zones were created: the commercial redevelopment district (CRD), heavy industrial (M2), light industrial (M1), office/administrative (B2), and marine business (B1-C). The team will continue to use this plan as the basis for land reuse and will take the land reuse into consideration during the evaluation and implementation of LUCs. Any changes to eliminate LUCs, provide further cleanup that would result in a NFA, or use

an area outside of the what was established by the reuse plan would be at the expense and under the responsibility of the future end user. The landfill area and Zone E were two specific areas that will require LUCs.

Tony elaborated on the three ways to reach cleanup goals based on the process established by the BRAC Law: evaluating the environmental condition, evaluating the reuse plan, and evaluating the economic tradeoff between implementing LUCs versus cleanup to unrestricted use. Deeds, zoning requirements, and the original NEPA help establish these goals. Robert Ryan noted that zoning would not be applicable based on recent state legislature.

LUCs can be assigned based on the future use, groundwater restrictions, excavation restrictions, and engineering controls. Interim measure LUCs may be applied while final remedies are still being evaluated. The LUCs become part of the permit. An early executive team memorandum addressed the Zone E LUCs strategy. Tony recommended that this discussion be incorporated into the project notebook. Two copies of the project notebooks should be forwarded to DHEC: one for Don Hargrove and one for the public file.

Transfer of Remaining Property

Tony Hunt provided an informative briefing regarding the early property transfer process and submitting a schedule of activities associated with this work. No additional objections were made by Team members regarding the implementation of the early transfer at this time. It was agreed that the objections identified at the August 2000 early transfer proposal have been or will be addressed by the time this early transfer effort is implemented.

Tony outlined four assumptions that are required in order for this early transfer effort to take place:

1 - All sites will have enough information to perform a risk evaluation.

2 - All sites, including the sediment areas, will have enough investigation to identify the source of contamination and migration pathways.

3 - The same status applies for any new sites that are discovered during this time period.

4 - There will be enough knowledge of all sites that interim or final LUCs can be determined.

Tony proceeded to provide an overview of the schedule to develop the Finding of Suitability for Early Transfer (FOSET). Tetratech NUS will develop the FOSET. The Navy and CH2M-Jones will develop the Brownfield agreement.

Tony also noted that two sites would remain under the ownership of the Navy: The UXO (AOC 503) site and AOC 721. For all sites that require LUCs the Navy would remain as the responsible party until the site is clean or until a different party is willing to take the liability. This could occur through Brownfield agreements, which would transfer some or all of the LUC maintenance to another party or until a remedy reaches an unrestricted cleanup goal at which time the LUC would no longer be necessary. Additionally, a process is envisioned that will allow a prospective purchaser or interest to assume the liability for performing additional site cleanup when an unrestricted use is desired.

RDA Discussion

Robert Ryan discussed briefly the recent legislation regarding the future ownership of the Base and the division of land between the City of North Charleston and the States Ports Authority.

Project Managers Meeting

The project Managers meeting consisted primarily in a review of outstanding documents currently under review by DHEC and EPA. It was also noted that a number of Zone E sites would require a regulatory party assignment (DHEC vs. EPA).

Jerry inquired on the status of the various sites that were pulled out of the phase III EBS/FOST. He also would like for the team to evaluate SWMU 24 with regard to fuel distribution lines from drawings documents that do not appeared to correspond with field locations. CH2M-Jones will evaluate.

Dean also noted that SWMU 80 and AOC 566 appear to be the same. AOC 566 had previously received a NFA from EPA. CH2M to submit an administrative NFA request from DHEC on SWMU 80.

The next BCT meeting is scheduled for September 9-11, in Charleston, SC.

Parking Lot/ Action Items

- CH2M to forward comments on the 90% design for the Avenue D improvements
- Gary and Tony to draft a document summarizing what will be required to be included in the project notebook.
- Charlie Vernoy will replace Steve Parker as the POC for Ensafe on this project.
- David Scaturo to develop write up, and forward to BCT members for review, on submitting the CNC project as a pilot site.
- Gary to provide team members an updated submittal tracker.
- CH2M-Jones to evaluate free product at SWMU 39 well 18.
- CH2M to forward two copies of the project notebook for Mr. Hargrove and the public file.

List of Attendees:

U.S. Navy: Rob Harrell, Tony Hunt
USEPA: Dann Spariosu
SCDHEC: Jerry Stamps, Paul Bergstrand, Gill Rennhack, Joe Cherie Overcash, Stacey French, Mansour Malik, Don Hargrove, Susan Byrd, Jack Gelting, Keith Collinsworth, and David Scaturo.
CH2M-Jones: Gary Foster, Dean Williamson, Paul Favara, Sam Naik, Louise Palmer, Tom Beisel, and Richard Garcia.
EnSafe: Steve Parker and Charlie Vernoy
RDA: Robert Ryan (8/14/02 only)